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ENERGY STAR Qualified Homes, Version 3 (Rev. 01) Inspection Checklists For National Program Requirements

As described in the ENERGY STAR Qualified Homes National Program Requirements, Version 3 (Rev. 01), one prerequisite for qualification is that a home must meet the requirements of the four attached checklists:

- Thermal Enclosure System Rater Checklist
- HVAC System Quality Installation Contractor Checklist
- HVAC System Quality Installation Rater Checklist
- Water Management System Builder Checklist (or Indoor airPLUS Verification Checklist)¹

To be eligible for qualification, a home must also meet the other requirements listed in the national program requirements document, including verification of all requirements by a Rater.² Note that compliance with these guidelines is not intended to imply compliance with all local code requirements that may be applicable to the home to be built. Where requirements of the local codes, manufacturers' installation instructions, engineering documents, or regional ENERGY STAR programs overlap with the requirements of these guidelines, EPA offers the following guidance:

- a. In cases where the overlapping requirements exceed the ENERGY STAR guidelines, these overlapping requirements shall be met;
- b. In cases where overlapping requirements conflict with a requirement of these ENERGY STAR guidelines (e.g., slab insulation is prohibited to allow visual access for termite inspections), then the conflicting requirement within these guidelines shall not be met. Qualification shall only be allowed if the rater has determined that no equivalent option is available that could meet the intent of the conflicting requirement of these ENERGY STAR guidelines (e.g., switching from exterior to interior slab edge insulation).

Raters are expected to use their experience and discretion to verify that each checklist item is installed per the inspection guidelines (i.e., identifying major defects that undermine the intent of the checklist item versus identifying minor defects that the Rater may deem acceptable). Alternative methods of meeting the checklist requirements may be used if the Provider deems them to be equivalent to or more stringent than the checklist guidelines. However, in all cases, these "equivalent" determinations shall be reported prior to project completion to energystarhomes@energystar.gov. This will allow EPA to make formal policy decisions, as needed, to ensure consistent enforcement of the guidelines and to provide a resource for other partners with similar questions.

The Rater must review all items on the Rater checklists. The column titled "N/A," which denotes items that are "not applicable," should be used when the checklist item is not present in the home or conflicts with local requirements.

In the event that a Rater finds an item that is inconsistent with the checklist guidelines, the home cannot earn the ENERGY STAR until the item is corrected. If correction of the item is not possible, the home cannot earn the ENERGY STAR. In the event that an item on a Rater checklist cannot be inspected by the Rater, the home also cannot earn the ENERGY STAR. The only exceptions to this rule are in the Thermal Enclosure System Rater Checklist, where the builder may assume responsibility for verifying a maximum of eight items. This option shall only be used at the discretion of the Rater. When exercised, the builder's responsibility will be formally acknowledged by the builder signing off on the checklist for the item(s) that they verified.

The Rater is required to keep hard copies of the completed and signed checklists. The signature of the HVAC technician is required if any of the HVAC equipment specified on the HVAC System Quality Installation Contractor Checklist is installed in the home.

All checklists, including the HVAC System Quality Installation Contractor Checklist and Water Management System Builder Checklist may be completed for a batch of homes using a RESNET-approved sampling protocol to qualify homes as ENERGY STAR. For example, if the approved sampling protocol requires rating one in seven homes, then all of the checklists must be completed for the one required rating.

Rater Name:	☐ Rater has verified that HVAC contractor
Rater Company Name:	holds credentials necessary to complete the HVAC System Quality Installation
Builder Company Name:	Contractor checklist
HVAC Company Name:	Rater has verified that builder is an ENERGY STAR Partner



ENERGY STAR Qualified Homes, Version 3 (Rev. 05) National Program Requirements

Qualifying Homes

The following homes are eligible to earn the ENERGY STAR:

- · Single family homes; OR
- Units in any multifamily building with 4 units or fewer; OR
- Units in multifamily buildings with 3 stories or fewer above-grade^{1,2}; OR
- Units in multifamily buildings with 4 or 5 stories above-grade^{1,2} that have their own heating, cooling, and hot water systems³, separate from other units, and where dwelling units occupy 80% or more of the occupiable² square footage of the building⁴. When evaluating mixed—use buildings for eligibility, exclude commercial / retail space when assessing whether the 80% threshold has been met.

Units in multifamily buildings that are not eligible to earn the ENERGY STAR through the New Homes Program may be eligible through the Multifamily High Rise Program.

Homes may earn the ENERGY STAR using the following ENERGY STAR Prescriptive Path or Performance Path in all states except those for which regional program requirements have been developed. See EPA's Web site for the latest list. Note that compliance with these guidelines is not intended to imply compliance with all local code requirements that may be applicable to the home to be built.⁵

ENERGY STAR Prescriptive Path

The Prescriptive Path provides a single set of measures that can be used to construct an ENERGY STAR qualified home. Modeling is not required; however, no tradeoffs are allowed. Follow these steps to use the Prescriptive Path:

- 1. First, assess the eligibility to follow the Prescriptive Path by comparing the conditioned floor area (CFA) of the home to be built to the CFA of the Benchmark Home as specified in Exhibit 3.⁶ For the purposes of this step, calculate the number of bedrooms and the CFA of the home to be built using RESNET standards with the following exception: floor area in basements with at least half of the gross surface area of the basement's exterior walls below grade shall not be counted.⁷ If a home has zero bedrooms with regard to the Benchmark Home Size determination, then the Benchmark Home Size for one bedroom shall be used. If the CFA of the home to be built exceeds the CFA of the Benchmark Home, then the Performance Path shall be used.
- 2. If the home to be built is eligible to follow the Prescriptive Path, build the home using all requirements of the ENERGY STAR Reference Design, Exhibit 1, and the Mandatory Requirements for All Qualified Homes, Exhibit 2.
- 3. Using a Rater, verify that all requirements have been met in accordance with the Mandatory Requirements for All Qualified Homes and with RESNET's On-Site Inspection Procedures for Minimum Rated Features.⁸

ENERGY STAR Performance Path

The Performance Path provides flexibility to select a custom combination of measures for each home that is equivalent in performance to the minimum requirements of the ENERGY STAR Reference Design Home, Exhibit 1. Equivalent performance is assessed through energy modeling. Follow the steps below to use the Performance Path:

- Determine the ENERGY STAR HERS Index Target, which is the highest numerical HERS Index value that each rated home may achieve to earn the ENERGY STAR. This target shall be specifically determined for each rated home by following the steps outlined in the ENERGY STAR HERS Index Target Procedure, Version 3 (Rev. 05), available on EPA's Website. This procedure defines how to configure the ENERGY STAR Reference Design Home and calculate its associated HERS Index value and then how to apply the Size Adjustment Factor to determine the ENERGY STAR HERS Index Target.
 - Note that this process shall be completed manually by a Rater until a version of the RESNET-accredited software program used by the Rater becomes available that automatically configures the ENERGY STAR Reference Design, calculates its associated HERS Index value, and then applies the Size Adjustment Factor to determine the ENERGY STAR HERS Index Target. Upon release of such a version, Raters using that software program shall have 60 days to begin all new ratings with this version.
- 2. Using the same RESNET-accredited Home Energy Rating software program, configure the preferred set of energy measures for the rated home and verify that the resulting HERS Index meets or exceeds the ENERGY STAR HERS Index Target, as determined in Step 1. Note that, regardless of the measures selected, Mandatory Requirements for All Qualified Homes in Exhibit 2 are also required. Also note that Items 1.2 and 2.1 of the Thermal Enclosure System Rater checklist require that all insulation, windows, doors, and skylights meet or exceed 2009 IECC requirements. ^{10,11,12,13}
 - Furthermore, on-site power generation may only be used to meet the ENERGY STAR HERS Index Target for homes that are larger than the Benchmark Home and only for the incremental change in ENERGY STAR HERS Index Target caused by the Size Adjustment Factor, as outlined in the ENERGY STAR HERS Index Target Procedure, Version 3 (Rev. 05).
- 3. Construct the home using measures selected in Step 2 and the Mandatory Requirements for All Qualified Homes, Exhibit 2.
- Using a Rater, verify that all requirements have been met in accordance with the Mandatory Requirements for All Qualified Homes and with RESNET's On-Site Inspection Procedures for Minimum Rated Features.

Partnership, Training, and Credentialing Requirements

Builders, Raters, and HVAC contractors must meet the following requirements prior to qualifying homes under these guidelines:

- Builders are required to be ENERGY STAR partners and complete the online Version 3 Builder Orientation. Partnership Agreements and Version 3 Builder Orientation can be found at www.energystar.gov/homesPA.
- HVAC contractors must be credentialed by an EPA-recognized HVAC Quality Installation Training and Oversight Organization (H-QUITO). An explanation of this process and links to H-QUITOs can be found at www.energystar.gov/newhomesHVAC.
- Raters and Field Inspectors are required to complete Version 3 Training which can be found at www.resnet.us/energystar.

